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Linking Inpatient Rehabilitation Stay Records Lacking Common Identifiers of Some Critical Issues

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Description of Study and Method: This paper examines the problem of linking stay records for Medicare inpatient rehabilitation patients when the data sets to be linked do not share a common patient level identifier. Two data sources for CYs 1990 and 1991 were used: Uniform Data System for Medical Rehabilitation and MEDPAR. Methodologies for deterministic and probabalistic models based on common data elements are described.

Major Findings: Using deterministic linkage based on age, sex and race given exact matches on provider identifier, admission date, and discharge date, a linkage rate of 84.5 percent was obtained.

Probabalistic linkage methodology improved on the results obtained by "exact matching." Linkage rates varied from 87.1 percent to 96.8 percent depending on the error level one wished to accept. The preferred strategy (allowing for one miss) obtained a linkage rate of 91.3 percent. Often, in practice, the error rate tolerated is inversely related to population size and sampling considerations.



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